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## **Color film technology and new historiography – an interdisciplinary approach**

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## Color Film Technology and New Historiography. An Interdisciplinary Approach

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[Noemi: Introduction to our Theory and Methodology (1-7)] (→8)

If we approach contemporary, primary sources with a combination of a discourse analysis and the vocabulary of the Social Construction of Technology (short SCOT), we can help write new historiographies f.e. in the realm of color film technologies. I'm going to present how I am applying this method to my own research on the development of chromogenic color processes. In particular, the introduction of the first negative-positive-process Agfacolor.

(→9) By isolating the first 10 years of Agfacolor's existence, I can put my focus on specific national, historical and socio-political contexts.

(→10) I call this period between 1935 and 1945 the phase of formation. The analyzed sources for this period are discourses from contemporary journals which can be regarded as the dominant sources from that time from Germany. The 3 examples are:

- (→11) From the propagandistic journal "Signal", introducing "the easiest color film process of the world"
- (→12) A publication from Agfa's scientists who discovered Agfacolor's non-diffusing color components, Wilhelm Schneider and the head of the Technical Scientific department (Technisch Wissenschaftliche Abteilung), Gustav Willmanns.
- (→13) and last but not least an article from the technical journal Elektrotechnische Zeitschrift about the Agfacolor process.

I pick out the last example to demonstrate my application of our method:

(→14) As we heard before, SCOT introduces 4 different categories: Social groups, artifacts, problems and solutions. By asking what kind of problems are important for a specific social group and how these problems were declared as solved with the introduction of a certain artifact, I start analyzing the presented primary source according to these categories. In addition, while deconstructing the discursive practices, I can replace problems with social needs and solutions with so-called rhetorical closures.

(→15) WHAT ARE PROBLEMS/NEEDS DISCURSIVELY CONSTRUCTED IN THE DOMINANT SOURCE?

- (→16) Numerous/Multiple solutions for different areas of photography and cinematography
- (→17) High complexity in the application

- (→18) Loss of brightness and sharpness in projection (lenticular processes)
- (→19) Hard to reproduce (reversal Kodachrome)
- (→20) Unsatisfactory color rendition

(→21) IN WHAT WAY ARE THESE PROBLEMS DECLARED AS SOLVED? Meaning, which solutions for a problem are discursively constructed?

- (→22) Package solution
- (→23) Ease of operation and adaptability to existing equipment and techniques
- (→24) One single filmstrip without the need of additional light consuming equipment
- (→25) Negative-positive-process and reversal color
- (→26) Training of users and viewers

At this point I can create a corresponding network, taking into account the problems and solutions mentioned before (→27). I link these problems to the addressed solutions.

The next step is to raise them to a higher, more general level, inspired by the basic human needs as they were introduced by the psychologist Abraham Maslow in his pyramid of needs, published for the first time in 1943 (→28). His hierarchy ranges from Physiological needs, over safety needs, Love and Belonging, Esteem to Self-actualization.

From the problems and solutions gathered with the primary sources, I can derive three recurring general problems/needs (→29):

- **Stability:** reproducibility/duplication, reliable production conditions, availability
- **Compatibility:** easy handling, use of existing equipment and cultural techniques
- **Aesthetics:** natural color, color harmony, skin color – color rendition of the colors of ‘nature’

Difference to Maslow: We are using a bottom-up-approach to understand what kind of social needs are addressed in primary sources. The hierarchy and pyramid structure is highly debatable but acknowledges the principle of a certain order. A longing for esteem is not the first thing you think about when your safety is at risk but you are not the only person in a bigger society. There are many heterogenous social groups founding a heterogenous system in which needs from different hierarchical levels can exist at the same time. This could be a good indicator for discriminatory practices carried out on the back of color and color films.

(→30) Of course, I can extend the network with the corresponding artifacts and social groups which were addressed by the analyzed article: Kodachrome in opposition to Agfacolor and Amateurs and Professionals as separated users.

These discursive formations are on the one hand temporarily specific because they appear in this constellation in the historical moment concerned. On the other hand, their singular elements and references are also recurring. They follow their own timeline and genealogy. To speak with the cultural scientist Stuart Hall: “Every articulation is a re-articulation of a de-articulation.” (Hall 2004: 224).

(→31) An example for such a continuing practice is a commercial flyer for Agfacolor, presumably from the 1950s. It refers to the same problems and solutions which were already addressed during its introduction in the 1930s and 40s: Stable production conditions, easy compatibility with existing equipment and a satisfactory color rendition, also when used outdoors.

This is the moment when the role of the critical researcher becomes highly important. We have to distinguish facts about technological artifacts from marketing strategies or rhetorical closures.

(→32) The networks we are using for our research are rather a tool than a closed method and they don't replace a personal and individual interpretation. They are in a way ahistorical but they also bring together different temporalities without determining priorities for a single part of it. Hence, they give us the chance to see new relationships and genealogies, neglected by other, teleologically and chronologically oriented historiographies. And suddenly, new paths, contexts, conflicts and questions arise that have to be asked although there might be no immediate answers at hand for the moment. Such as, on the level of historiography:

(→33) Which people and sources have influenced/informed current historiographies?

(→34) What kind of sources are neglected and why?

And in order to adopt new methods for the history of technology, we have to ask:

(→35) What kind of power relationships between social groups are negotiated? What are the sociopolitical dynamics behind a historical moment?

(→36) Which social group decided on the successful closure of a problem? Which needs were ignored by a color film manufacturer?

**(→37)** What are recurring discourses and in what way are they coming back in the form of re-articulations at a specific moment?

We aim for more transparency, especially to enable a research environment in which we share our findings and analysis methods so that new can write new historiographies, together.

**(→38)** Thank you for your attention!